

Patent claims

1. A method for identifying an agent that has an influence on the amount of an analyte expressed by a cell, said method comprising the following steps
 - 5 (a) providing a medium comprising a cell with the ability to express at least 2 analytes upon stimulation,
 - (b) providing means for stimulation of said cell to express such analytes,
 - (c) providing a candidate compound,
 - 10 (d) contacting the medium of (a) with the means for stimulation of (b) for a sufficient period of time to obtain a medium comprising a stimulated cell, and adding a candidate compound before, simultaneously or shortly after contacting; or adding no candidate compound,
 - (e) optionally disrupting cells,
 - 15 (f) providing a matrix comprising pins which pins are coated with a coating mixture comprising at least 2 different recognition molecules, from each of which it is known that it will bind at a specific binding site to one of the analytes,
 - (g) contacting the pins of the matrix of (f) with the medium obtained in (d) for a sufficient period of time to allow the formation of recognition complexes on the pins of said matrix, each recognition complex being a complex formed by binding of one
20 single analyte to its specific recognition molecule,
 - (h) providing at least 2 different detection molecules, from which detection molecules it is known that each will bind to a specific binding site of one of the recognition complexes formed in (g) without interfering with the binding of said analyte to its recognition molecule,
 - 25 (i) contacting the detection molecules of (h) with the pins of the matrix obtained in (g) for a sufficient period of time to allow the formation of detection complexes on the pins of said matrix, each detection complex being a complex formed by binding of one single recognition complex to its specific detection molecule,
 - (j) determining each amount of each detection complex formed on the pins in (i),
30 (k) comparing each amount of detection complex formed in the absence and in the presence of a candidate compound, and
 - (l) choosing an agent which has an influence on the amount of at least one of the detection complexes formed as determined in (j) and (k).

2. The method of claim 1 wherein said analyte is selected from the group consisting of human IL-4, IL-10 and IFN- γ .
3. The method of any one of claims 1 or 2, wherein said recognition molecule is selected
5 from the group consisting of antibodies to human IL-4, IL-10 and IFN- γ .
4. The method of any one of claims 1 to 3 wherein the said detection molecule is selected
10 from the group consisting of labeled antibodies to human IL-4, IL-10 and IFN- γ , said
detection molecule recognizing an epitope of said analyte which is different to that
recognized by the recognition molecule.
5. A kit for identifying an agent that has an influence on the amount of an analyte
expressed by a cell, which kit comprises
 - (a) a medium comprising a cell with the ability to express at least 2 analytes upon
15 stimulation,
 - (b) means for stimulating said cell to express such analytes,
 - (c) optionally means for cell disruption,
 - (d) a matrix comprising pins which are coated with a coating mixture comprising at least
20 2 different recognition molecules, from each of which it is known that it will bind at a
specific binding site to one of the analytes, thus forming a recognition complex upon
contact with one of the analytes of (a) on the pins,
 - (e) at least 2 detection molecules, from which detection molecules it is known that each
will bind to a specific binding site of one of the recognition complexes formed
25 according to (d) without interfering with the binding of said analyte to its recognition
molecule, thus forming a detection complex upon contact with a recognition
complex formed according to (d) on the pins,
 - (f) means for determining the amount of a detection complex formed on said pins.
 - (g) well system(s) wherein the number and form correspond to the pins comprised in
the matrix of (d),
 - 30 (h) optionally calibration standards for analytes expressed by cells of (a),
 - (i) optionally control sample(s) containing known amounts/concentrations of analytes
expressed by cells of (a), and
 - (j) optionally instructions for using the components of said kit to quantify or to detect
analytes expressed by cells of (a) in a sample.

6. An agent identified by a method according to any one of claims 1 to 4.
7. An agent of claim 6 for use as a pharmaceutical.
8. An agent identified by a method according to any one of claims 2 to 4 for the manufacture of a medicament for the treatment of autoimmune related diseases or allergic diseases.
9. A pharmaceutical composition comprising an agent identified by a method according to any one of claims 1 to 4 in association with at least one pharmaceutical excipient.
10. A method of treatment of autoimmune related diseases or allergic diseases, which treatment comprises administering to a subject in need of such treatment an effective amount of an agent identified according to any one of claims 2 to 4.